UNITED STATES
DEPARTMENT OF AGRICULTURE

ECONOMIC TRENDS AFFECTING AGRICULTURE

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ECONOMIC TRENDS AFFECTING AGRICULTURE

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Introduction

Farmers could get along formerly with comparatively few economic facts. They were not meshed, as they are today, in a tangle of complex relationships involving the industry, business, and finance of the entire world. American agriculture a century ago was comparatively self-sustaining; it could be jarred but not shaken to its foundations by happenings abroad. It was not so geared to a world mechanism that detailed information about that mechanism was necessary to its very existence.

Things are different now. What happens off the farm affects agriculture vitally. Facts about currencies, business conditions, industrial employment, wages, factory output, foreign tariffs, and consumer buying power matter quite as much as do strictly agricultural facts. Economic information useful to farmers no longer means information relating exclusively or even mainly to farming. It touches practically every phase of our complex and highly integrated economic system.

This compilation of charts and tables, which is intended primarily for agricultural extension workers, shows some of the forces that have recently shaped the course of American agriculture. It is not comprehensive or exhaustive. It deals not with specific farm commodities but with selected facts that touch all branches of agriculture. It is a mere outline. A full account would require volumes. Many readers will doubtless want more details, particularly details for 1933, which they may obtain from the United States Department of Agriculture.

The data are grouped broadly so as to emphasize: First, the relation of the domestic industrial depression to agriculture; second, certain world influences on American agriculture; and third, some of the resulting maladjustments in incomes and prices.

Outstanding in importance are the statistics about our agricultural export trade, for this trade powerfully influences agricultural prices. Farm returns depend, however, on the relation of farm production to the total demand. Accordingly, the booklet includes data regarding

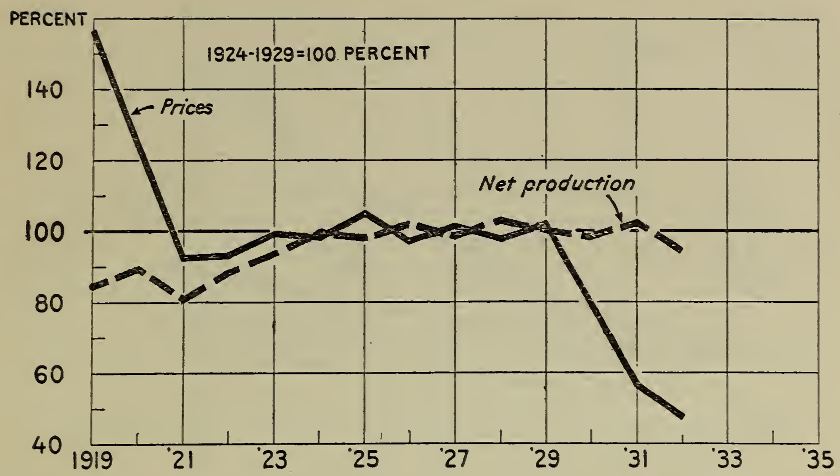
consumer buying power in the United States. It gives figures on distribution of the national income, on factory employment and wages, on bank suspensions, and on the factory utilization of agricultural products.

Foreign agricultural competition affects the American market, because it influences our exports. This competition is indicated in charts that compare American with foreign agricultural expansion. Other charts show how stocks of certain products have accumulated in the United States, through the combined influences of increased foreign competition, reduced demand at home and abroad, and trade restrictions.

Finally, the booklet gives figures indicating the effect of these various influences on agricultural prices and agricultural purchasing power. Price relationships going back a hundred years furnish a basis for inferences as to recent developments. As the charts indicate, the price disparities of the post-war period wiped out the purchasing-power gains of a century. Several tables record the effect on agricultural incomes and capital values.

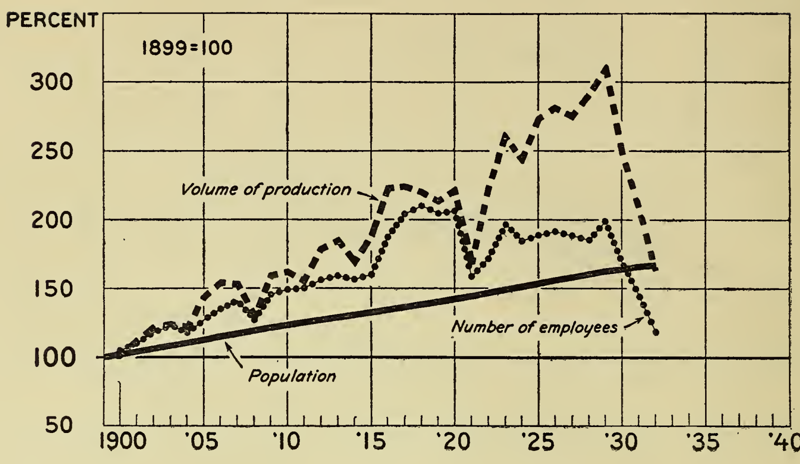
Ten years ago the United States Department of Agriculture began urging farmers to consider the basic elements of supply and demand, as well as past and current prices, in planning their production. It developed the warning systematically through its Outlook Reports. The principle then enunciated stands out today as more important than ever. Broader than ever, moreover, is the logical definition of the term "basic elements" in the supply-and-demand equation. These elements include not merely facts as to farm production and supplies, but also information about industrial conditions and broad trends in national and world developments; such information, in short, as this publication outlines.

Farm Production and Prices



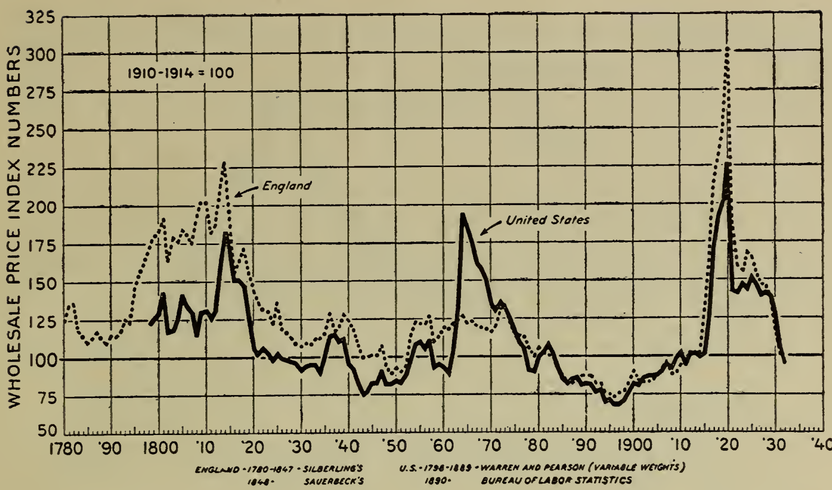
Indexes of net agricultural production and prices, United States, 1919–32. From 1924 to 1932 our total agricultural production remained fairly stable, although some farm enterprises expanded and others contracted. Growth of population in the period was at a slower rate than formerly, and the export demand for our farm products declined. The decline of agricultural prices after 1929 reflected these changes, and also the influence of deflation generally. Stocks of certain basic farm commodities piled up.

Factory Production and Employment



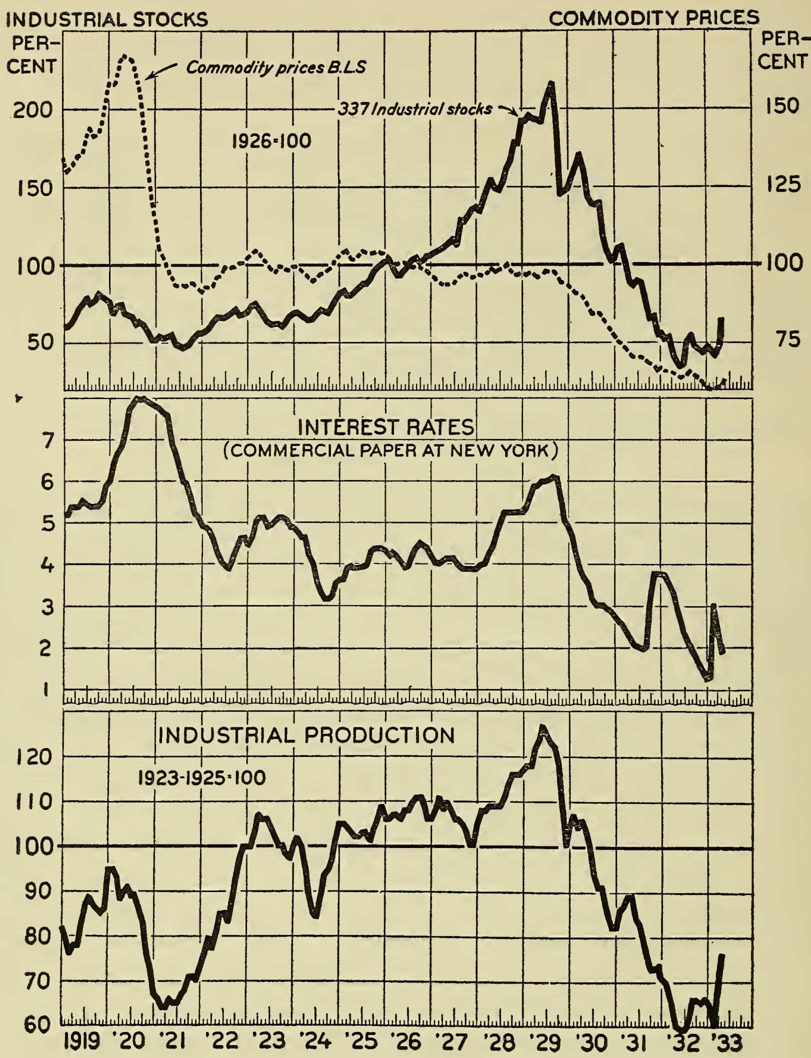
Production of manufactures, factory employment, and population, United States 1899–1932. Industrial conditions affect agriculture vitally. Industrial output in this country increased tremendously from 1900 to 1929, without a proportionate increase in the number of factory employees. When industrial activity declined in 1930, 1931, and 1932, wiping out the per capita increase of the previous 30 years, factory employment diminished so greatly that the purchasing power of the urban community fell by more than half. In these circumstances farm products could not be sold except at sacrifice prices.

The General Commodity Price Level



Wholesale price index numbers in England and in the United States, 1780–1932. Following the war-time rise of prices was a period of price declines broadly similar to the declines of former post-war periods. Such declines took place after 1780, 1814, and 1864. In these three former post-war periods prices returned to the respective pre-war levels, and then to still lower levels. In the 1830's there was inflation of credit and currency accompanied by land booms and by canal and railroad construction. By 1843, however, another decline had carried the general average of commodity prices to a new low point. Some credit expansion took place from 1879 to 1882. It was associated with the resumption of specie payments by the United States Government, with active foreign demand for our surplus crops, with an influx of gold, and with industrial and railroad expansion. This period was followed by still lower levels of commodity prices in 1886 and 1896. These historical instances should not be considered as necessarily prophetic. Prices depend not merely on tangible elements in supply and demand, but on national monetary policy. The present monetary policy of the United States has features that distinguish it significantly from previous monetary policies. Usually the level of commodity prices in the United States depends to a large extent on the level of prices in other important countries. One exception occurred during the Civil War, when the United States currency prices were inflated by the issuance of greenbacks, which caused prices in the United States to rise higher than in England. Another exception occurred during 1915–20, when prices in England rose higher than in the United States, as a result of England's depreciating her currency by going off the gold standard.

Post-war Boom and Collapse



Indexes of prices of industrial stocks and commodities, interest rates, and industrial production. In sharp contrast with the relatively stable course of agricultural income in the United States from 1924 to 1929 was the speculative and industrial boom. This boom, however, was not marked by sharply rising commodity prices. On the contrary, the price level, after a decline in 1920, remained relatively stable until 1929. Industries expanded their production, and the increased output at stable prices brought increased profits and supported tremendous speculation in securities. The boom derived impetus from an inflow of gold and from domestic credit expansion at declining rates of interest. As is well known, it came to an end in 1929. Among the factors prominent in the collapse were: Uncoordinated and unbalanced expansion in certain branches of industry; extreme maldistribution of the national income between city and country areas; a much greater increase in profits than in wage payments; increased competition in foreign markets, especially in agricultural products; the efforts of many countries to put their currencies back on the gold standard; and in 1929 a sharp decline in loans by the United States to foreign countries.

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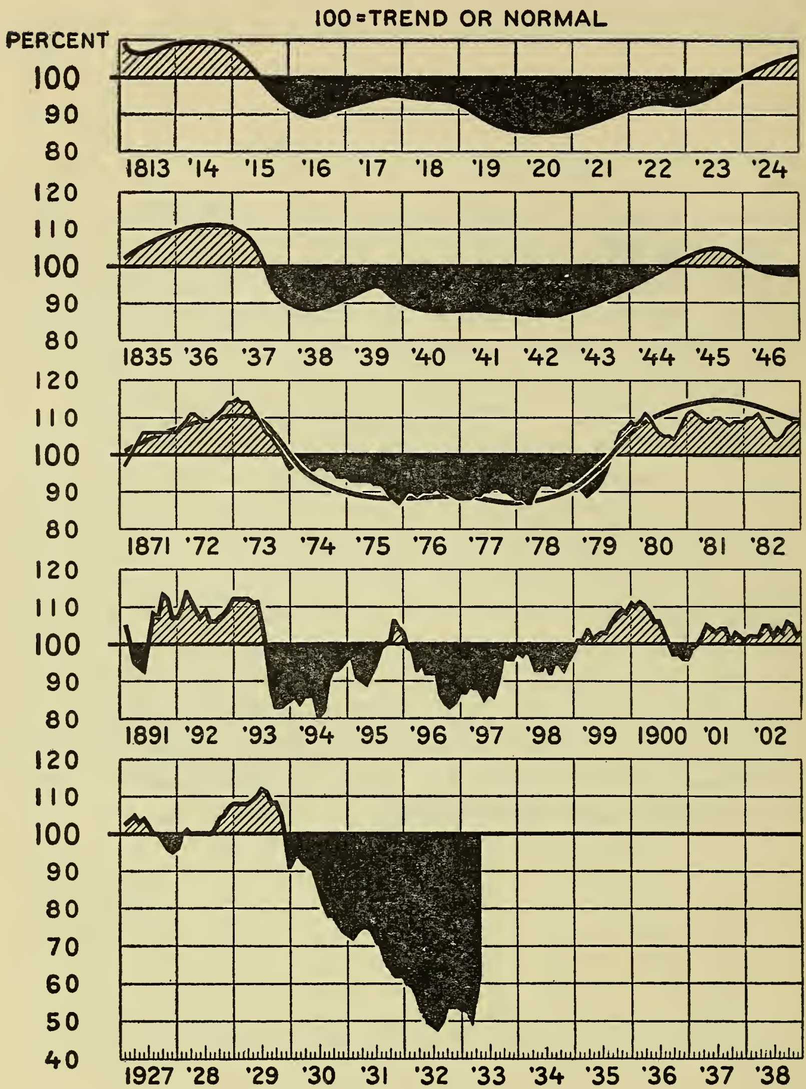
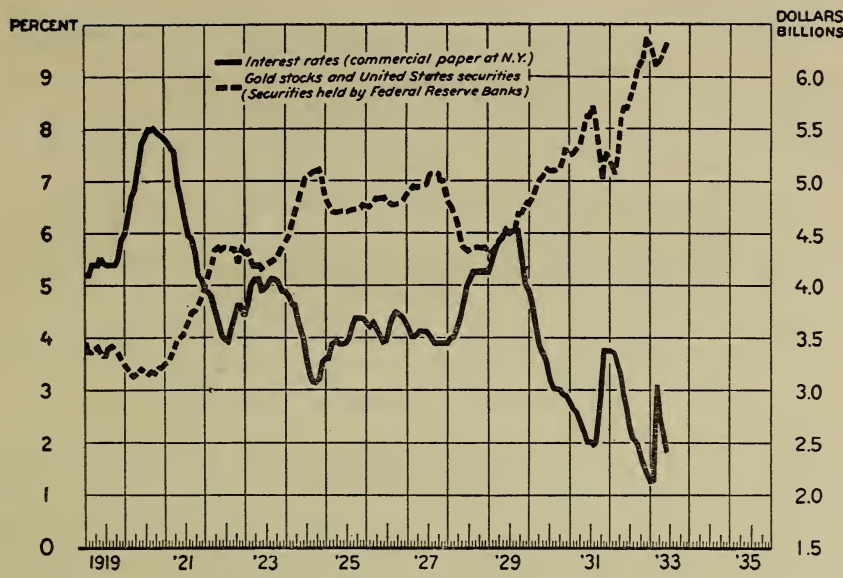
Prolonged Industrial Depressions



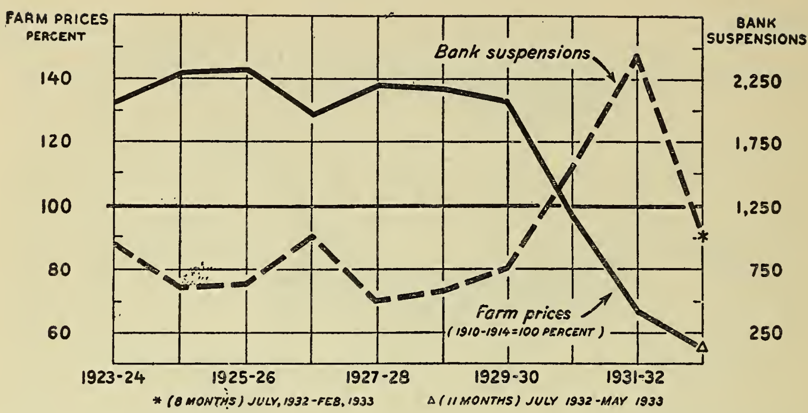
Business activity in the United States during five prolonged depressions. The 1930–33 industrial depression has turned out to be more severe than any of the prolonged depressions in this country since 1800.

Supply and Price of Credit



Interest rates, United States gold stocks and Government securities held by Federal Reserve Banks, 1919–33. After the war interest rates in the United States declined, and remained low enough from 1922–28 to promote enterprise greatly. A sharp rise preceded the crisis of 1929, after which the trend turned sharply downward. Generally, the decline of interest rates reflected an increase in the holdings of gold and during 1931 and 1932 in holdings of Government securities by the banks. There was a heavy inflow of gold to the United States after the war. The movement resulted partly from debt payments by foreign countries to the United States, and partly from a foreign speculative interest in American securities. Gold continued flowing into the United States freely even after the speculative boom had collapsed, because our foreign debtors found it cheaper to pay their obligations in gold than in depreciated currencies. In 1931 and 1932 the open market operations of the Federal Reserve Banks increased sharply the total of United States securities held by those institutions, and augmented the supply of loanable funds in the commercial banks. This condition and the low demand for credit were associated with record low interest rates.

Bank Failures and Farm Prices



Prices received by farmers and bank suspensions, 1923–32. It is not agriculture alone that suffers when agricultural prices fall. From the end of 1929 to the end of 1932, the farm-price slump was accompanied by a tremendous increase in bank suspensions. The financial structure was undermined as capital values crumbled.

Interdependence of Farm and Factory

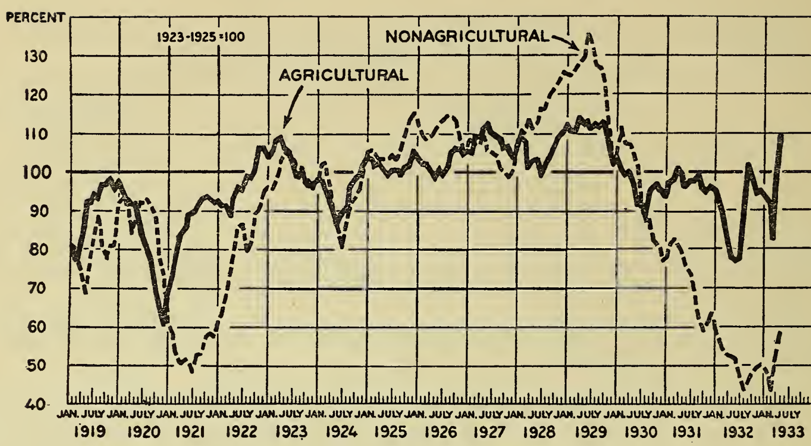
Data showing importance of manufacturing industries using chiefly agricultural raw materials [1]

Item	Percentage of all manufacturing industries			Item	Percentage of all manufacturing industries		
	1879	1904	1929		1879	1904	1929
Value of capital	43.9	39.9	------	Cost of materials	60.4	52.9	41.1
Number of wage earners	42.5	38.1	33.1	Value added by manufacture	41.3	37.3	28.9
Wages paid	37.2	32.2	26.8	Value of products	53.4	46.3	35.5

[1] Groups of industries included: Foods and kindred products; textiles and their products; vegetable oils; soap, grease, dyestuffs, and extracts; turpentine and rosin; leather and its finished products; tobacco; liquor and beverages; and brooms.

Practically everything produced on the farm enters the industrial world as raw material for manufacturing industries, as material for transport by railway or steamship, or as the basis for various services. The interdependence thus created between agriculture and industry requires stability and continuity in farm production, rather than alternations of glut and shortage. Industries using agricultural raw materials handle more than 41 percent of the materials consumed in manufacturing in this country. This percentage, however, is less than it formerly was. The decline indicates an industrial change to which agriculture must progressively adapt itself.

Factory Use of Farm Products



Indexes of production in factories using agricultural[1] and nonagricultural[2] materials. Factory utilization of farm products declined much less sharply than factory utilization of nonagricultural products after the slump of 1929. This does not signify that agriculture was damaged less than other industries. On the contrary, it suggests the persistence of agricultural production in the face of a declining demand. Farms, unlike factories, cannot be promptly shut down. Their production flows to the market, and must be handled there. Unless it is wasted, it must be stored, processed, or moved into consumption. In periods of overproduction, this takes place at extremely low prices. Factories handling agricultural products obtain their supplies for less money; and since, as a rule, the prices obtainable for the processed articles decline less, the factory operations tend to continue at a relatively high level.

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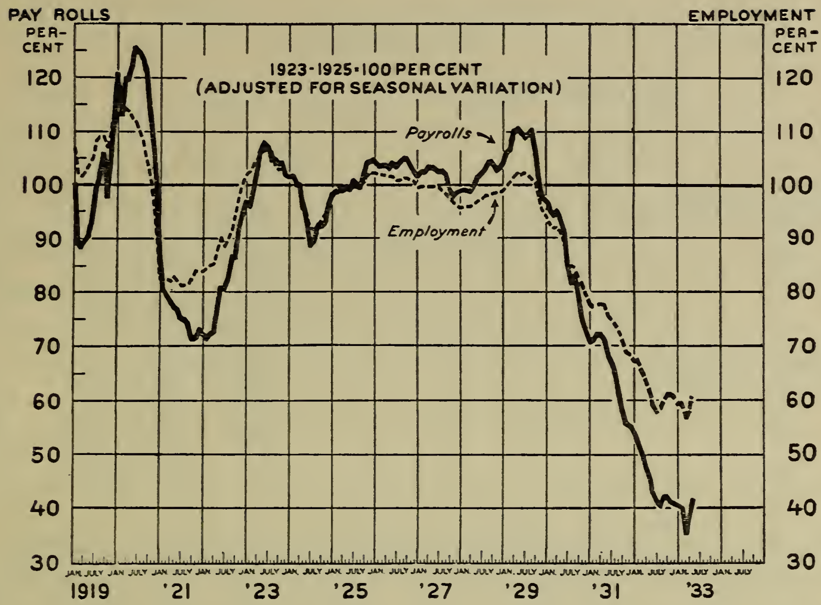
[1] Federal Reserve Board groups of foods, textiles, tobacco, leather products to which has been added an index of creamery-butter production.

[2] All other groups of the Federal Reserve Board index of manufactures (iron and steel; automobiles; cement, brick, and glass; nonferrous metals; petroleum; rubber tires; paper and printing).

Factory Employment and Pay Rolls



Indexes of factory employment and pay rolls. Farmers marketed their fairly even flow of total production of 1930–32 in the face of a greatly reduced consumer purchasing power. The money income of one large group—factory wage earners—was 65 percent lower at the beginning of 1933 than the years 1923–29. The reduction in wage rates contributed about a third to this shrinkage in earnings and the reduction in numbers employed and hands worked contributed the other two thirds.

Freight Bill on Farm Products

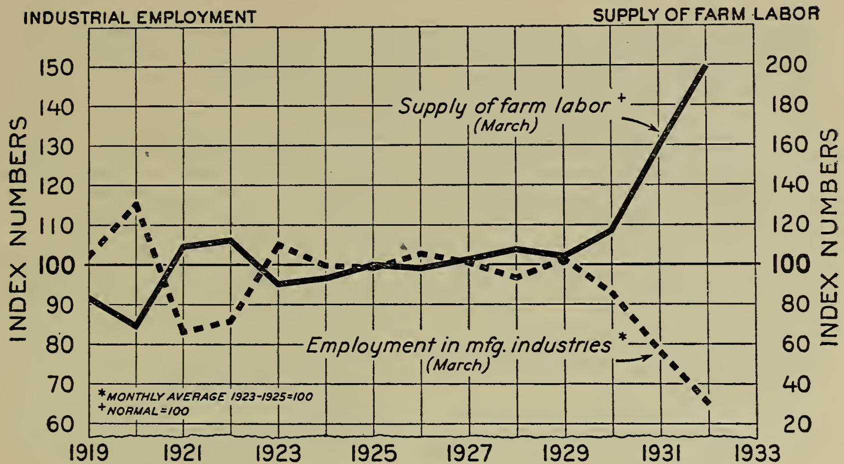
Agricultural and other traffic and revenues class I railways, United States, 1929 and 1932

Year and kind of product	Tonnage		Revenue	
	Million short tons	*Percent*	*Million dollars*	*Percent*
1929				
Products of agriculture	115. 3	8. 6	721. 6	14. 5
Animals and products	24. 9	1. 9	236. 5	4. 8
Agricultural manufacturing	28. 4	2. 1	168. 2	3. 4
Total	168. 6	12. 6	1, 126. 3	22. 7
All other	1, 170. 5	87. 4	3, 840. 3	77. 3
Total	1, 339. 1	100. 0	4, 966. 6	100. 0
1932				
Products of agriculture	80. 9	12. 5	480. 0	19. 0
Animals and products	18. 1	2. 8	190. 2	7. 5
Agricultural manufacturing	14. 6	2. 3	93. 5	3. 7
Total	113. 6	17. 6	763. 7	30. 2
All other	532. 6	82. 4	1, 770. 0	69. 8
Total	646. 2	100. 0	2, 533. 7	100. 0

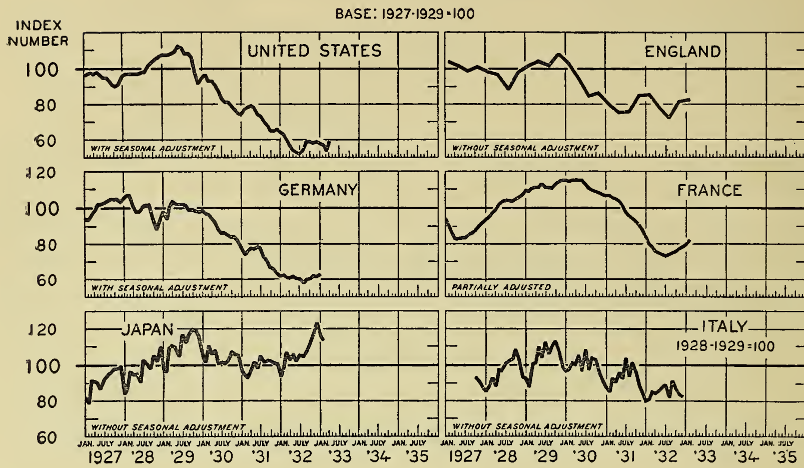
Of the total tonnage of freight handled by the class I railways of the United States in 1929, nearly 13 percent consisted of the products of agriculture, animals and their products, and agricultural manufactures. These brought 23 percent of the total freight revenue.

The shrinkage in the volume of agricultural marketings handled by the railroads between 1929 and 1932 was less than that for industrial products. In 1932, therefore, agricultural traffic supplied 18 percent in volume and 30 percent in revenue. In addition a much larger volume of farm products was transported by trucks during 1932 than in 1929.

Factory Employment and Farm Labor

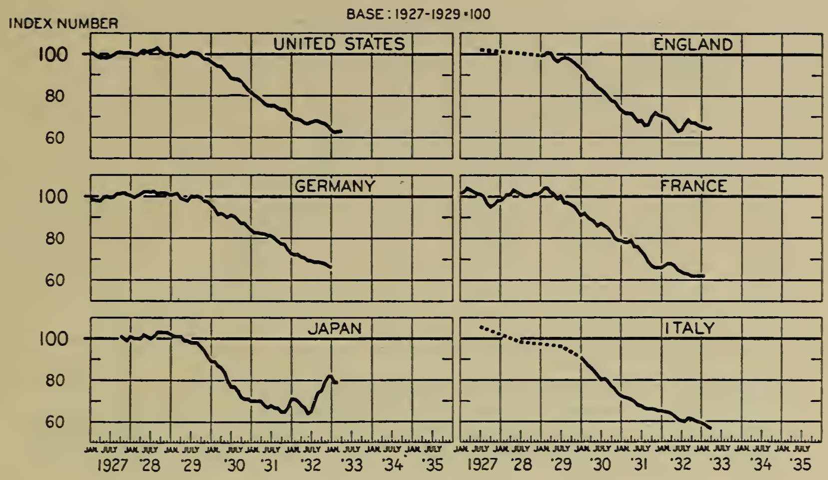


Farm labor and industrial employment. The industrial depression of 1929–33 checked the movement of farm population to cities, increased the movement of city people to farm communities and thus increased the farm population. The undirected and uncoordinated shift of city population to farms means not only a reduction in city demand for farm products but also a greater commercial supply of farm products, in the immediate future, and aggravates the agricultural-industrial disparity.



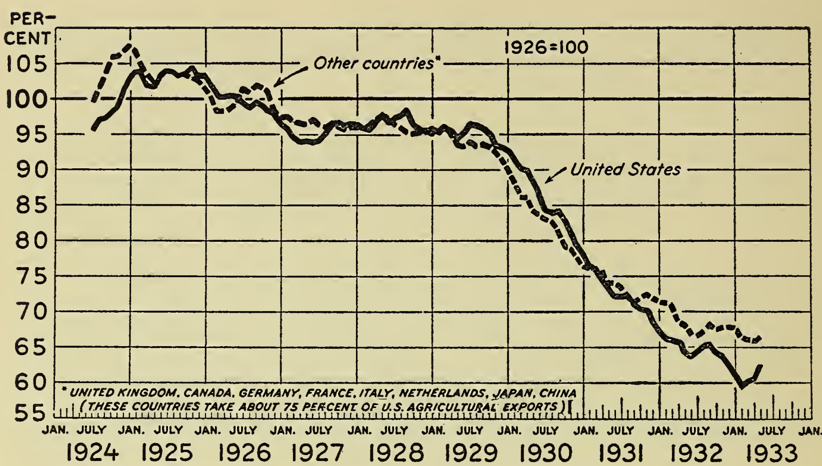
Indexes of industrial production, United States and selected foreign countries. Industrial production has declined from its predepression peak by a greater percentage in the United States than in certain other highly industrialized countries.

Prices at Home and Abroad



Indexes of wholesale prices, United States and selected foreign countries.

Trend of World Prices



Indexes of commodity prices in the United States and in other countries. Broadly, the commodity price level in the United States has moved with the world price level since 1924. After September 1931, when Great Britain and certain other countries abandoned the gold standard, the currency price level in the foreign countries involved declined less rapidly than the gold price level in the United States. In terms of gold the foreign price level, at the beginning of 1933, was about 10 percent below the United States level. Since the United States left the gold standard, the price level in this country has risen

World Trade in Commodities

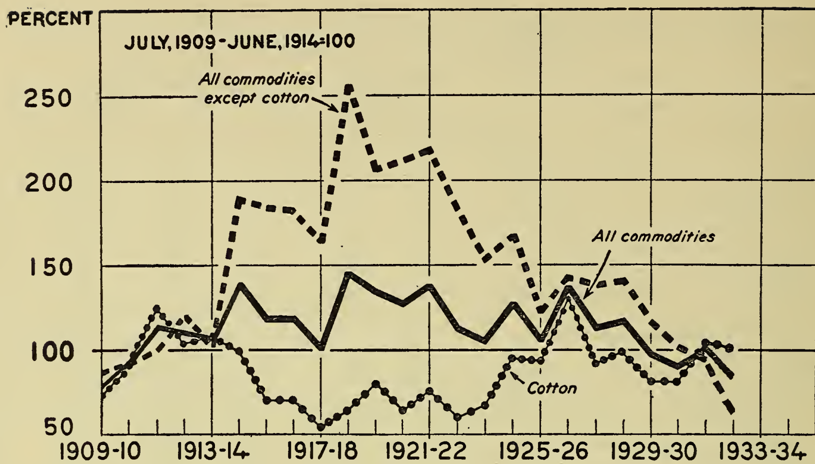
Monthly averages of exports and imports by geographic divisions

[In millions of dollars, i.e., 000,000 omitted]

Country	1928	1929	1930	1931	1932
Exports:					
Europe	1, 296	1, 318	1, 140	831	543
North America:					
United States	419	430	315	198	135
Canada	117	73	48	33	36
Asia	304	302	224	151	97
Latin America	189	181	116	88	61
Africa	74	72	61	51	47
Australia and New Zealand	78	70	51	37	31
Total	2, 477	2, 446	1, 956	1, 390	949
Imports:					
Europe	1, 621	1, 640	1, 408	1, 059	706
North America:					
United States	340	362	260	174	110
Canada	101	108	84	51	33
Asia	306	303	229	168	119
Latin America	146	150	112	62	38
Africa	70	77	66	50	34
Australia and New Zealand	74	76	52	23	21
Total	2, 659	2, 716	2, 210	1, 587	1, 061

The shrinkage in export and import trade since 1929 has been world wide. Both total world exports and total world imports at the beginning of 1933 were nearly two thirds less than in 1929. In physical volume the decline in trade amounted to about 30 percent and in prices per unit about 50 percent.

United States Agricultural Exports



Volume of United States agricultural exports. Total agricultural exports from the United States reached a record level during the war, and declined sharply thereafter. Wheat and pork exports declined most. Cotton exports, which had fallen off during the war because of reduced production and curtailed foreign textile activity, benefited between 1919 and 1925 by a revival of business activity abroad. Foreign takings of American cotton rose above the pre-war level in 1925–26, and then declined.

Our Foreign Trade

Exports and imports of the United States

Year beginning July	Exports			Imports		
	Total	Domestic agricultural	Percentage of total	Total	Agricultural	Percentage of total
	Million dollars	*Million dollars*	*Percent*	*Million dollars*	*Million dollars*	*Percent*
1909	1, 710	871	50. 9	1, 557	794	51. 0
1911	2, 170	1, 050	48. 4	1, 653	888	53. 7
1913	2, 329	1, 113	47. 8	1, 893	1, 000	52. 8
1915	4, 272	1, 518	35. 5	2, 197	1, 349	61. 4
1917	5, 838	2, 280	39. 1	2, 945	1, 826	62. 0
1919	7, 949	3, 861	48. 6	5, 238	3, 410	65. 1
1921	3, 699	1, 915	51. 8	2, 608	1, 371	52. 6
1923	4, 223	1, 867	44. 2	3, 554	1, 875	52. 8
1925	4, 653	1, 891	40. 7	4, 464	2, 529	56. 7
1927	4, 773	1, 815	38. 0	4, 147	2, 193	52. 9
1928	5, 283	1, 847	35. 0	4, 291	2, 179	50. 8
1929	4, 617	1, 495	32. 4	3, 848	1, 890	49. 1
1930	3, 031	1, 038	34. 2	2, 432	1, 163	47. 8
1931	1, 909	752	39. 4	1, 731	835	48. 3

Both the export and the import trade of the United States fell below the pre-war level in the 1931–32 season. There is a high degree of correspondence between the export and the import totals, which suggests their interdependence. Exports decline inevitably when imports decline, because imports constitute the most important means of balancing exports. In our reduced total export trade, the proportion held by agricultural commodities increased from 32 percent in 1929 to 39 percent in 1931–32. Nevertheless the actual volume of the agricultural export trade, as well as the value, was sharply lower.

Our Declining Exports

Gross income from farm production, farm value of agricultural exports, and percentage of production exported, 1919–32

Year	Gross income from farm production	Approximate farm value of exports	Farm production exported	Year	Gross income from farm production	Approximate farm value of exports	Farm production exported
	Million dollars	*Million dollars*	*Percent*		*Million dollars*	*Million dollars*	*Percent*
1919	16, 935	2, 682	15. 8	1926	11, 480	1, 423	12. 4
1920	13, 566	1, 745	12. 9	1927	11, 616	1, 528	13. 2
1921	8, 927	1, 390	15. 6	1928	11, 741	1, 435	12. 2
1922	9, 944	1, 313	13. 2	1929	11, 918	1, 215	10. 2
1923	11, 041	1, 427	12. 9	1930	9, 414	709	7. 5
1924	11, 337	1, 828	16. 1	1931	6, 911	467	6. 7
1925	11, 968	1, 464	12. 2	1932	5, 143	----------	[1] 6. 5

[1] Estimated.

American agriculture has been developed to produce not merely for the home market but for the world market. Almost from its inception it has exported a substantial fraction of its output. When any country, from year to year, has an exportable surplus of a commodity or group of commodities, the prices realized for the export surplus determine, in a normal market, the prices obtainable for the whole supply. The table shows how the export proportion of our farm production has declined since the war. There has been no corresponding decline in our total farm production, which on the contrary has increased. Here in a nutshell is much of the explanation for the present agricultural depression. Declining exports with mounting production naturally mean mounting surpluses.

Our Investments Abroad

New investments by Americans in foreign countries and foreign investment in the United States, 1919–32

[In millions of dollars, i.e., 000,000 omitted]

Year	New foreign securities sold in the United States	Direct American investment abroad	Foreign and American stocks and bonds bought from foreigners	Total annual investment of American capital in foreign countries [1]	Total annual investment of foreign capital in the United States	Net amount invested abroad
1896–1914				53	105	[2] 52
1919	436	300	234	970	515	455
1920	506	200	739	1,445	571	874
1921	665	200	227	1,092	303	789
1922	637	(3)	326	963	294	669
1923	363	(3)	54	417	435	[2] 18
1924	795	(3)	114	909	364	545
1925	920	(3)	90	1,010	551	459
1926	1,002	240	624	1,931	1,326	605
1927	1,183	257	804	2,314	1,609	705
1928	1,124	378	1,694	3,266	2,591	675
1929	635	350	1,407	2,469	2,328	141
1930	833	253	1,276	2,439	2,161	278
1931	213	197	842	1,302	1,520	[2] 218
1932	27	38	530	645	862	[2] 217

[1] Total for 1926–32 includes bond redemption and sinking fund payments and receipts.
[2] Net foreign capital invested in the United States.
[3] Not estimated.

Before the war the United States was a debtor nation. In the last 10 or 15 years, it has become the world's chief creditor nation. Foreign nations now owe us much more than we owe them, although they still have large credits here. Our balance of exports over imports prior to the war largely represented our interest payments on imported capital. In the war period foreign nations withdrew much of their capital, and we began lending to them. Our excess of exports over imports increased, but was differently balanced. It was balanced largely by our capital loans, which rose after the war to huge proportions. New foreign security flotations in the United States in 1928 exceeded $1,100,000,000, as compared with $363,000,000 in 1923. But the movement of capital was not exclusively a one-way traffic. Foreigners not only borrowed; they invested large sums in the United States. In 1932 the inflow of capital exceeded the outflow. However, the United States still remains heavily the world's creditor; and this fact has an important bearing on our foreign trade, in that it compels foreign nations to restrict their purchases here.

The United States as Creditor Nation

How the United States changed from a debtor into a creditor nation

Period	Foreign trade	How principally balanced
1. 1779–1820	Excess of imports	By profits of our merchant marine.
2. 1821–37	do	By inflow of foreign capital.
3. 1838–49	Excess of exports	By our interest payments on foreign loans.
4. 1850–73	Excess of imports	By inflow of foreign capital.
5. 1874–95	Excess of exports	By our interest payments on foreign loans.
6. 1876–1914	do	By our interest payments, and tourist expenditures and immigrant remittances.
7. 1915–18	do	By public and private loans to foreign countries.
8. 1919–21	do	By public and private loans and credit extended by exporters.
9. 1922–24	do	By foreign investments in the United States.
10. 1925–29	do	By private loans and tourist expenditures.
11. 1930–32	Excess of exports (much diminished).	By credits extended by exporters and tourist expenditures.

Since the Civil War the United States has exported more than it has imported. Up to 1915, the excess of exports mainly represented the payment of interest and capital on foreign investments in American agriculture, industry, and transportation. During and after the war the United States invested large amounts in Europe. As a result, the excess of exports over imports continued; but the financial basis of the trade movement changed. We had become a creditor Nation. Our export balance came to represent loans instead of debt payments to foreign countries. The previous debts had been largely paid off. In other words, we ourselves provided the money to pay for our exports. The alternative, which we declined to consider, was to receive foreign goods in payment.

The Balance of Trade

The pre-war and post-war balances of international payments of the United States

[In millions of dollars, i.e., 000,000 omitted]

Item	1896–1914	1925–29	1932
Merchandise trade	+488	+724	+289
Shipping and freight services	−64	−56	−45
Tourist expenditures	−170	−555	−375
Immigrant remittances	−150	−284	−163
Interest and dividends	−160	+488	+393
War-debt receipts; Government transactions; Other items	----------	+127	+32
Balance on current account	−56	+444	+131
Gold and currency	−9	+25	−91
Investments	+52	−517	+217
Trade-credit accommodations	----------	+184	−371
Balance on capital account	+43	−308	−245

In the 20 years before the war we exported more commodities than we imported. In payment for our net exports, foreign countries were able to use our payments to them in the form of tourist expenditures, immigrant remittances, and interest and dividend payments on foreign investments made in the United States.

During the post-war prosperity period, 1925–29, our commodity exports exceeded imports and tourist expenditures and immigrant remittances helped foreigners pay for our net exports. The huge private and public loans to foreign countries made during and after the war reversed the character of interest payments; the United States received annually nearly $500,000,000 contrasted with a net payment before the war of $160,000,000. But these interest payments were made possible largely by American purchases of foreign securities.

By 1932 the magnitude of each of the items in our balance of international payment was greatly reduced. The small export balance was more than offset by tourist expenditures and immigrant remittances. Interest payments were met largely by the creation of open accounts or credit accommodations.

In effect our net export of goods after the war and foreign payments on war-time borrowings, were made possible by American expenditures abroad and investments in foreign securities. The great reduction in foreign lending after 1928, has been accompanied by a shrinkage in trade and a piling up of unpaid obligations to the United States.

World Expansion in Agriculture

Crop acreages in the United States and competing countries

[In millions of acres, i.e., 000,000 omitted]

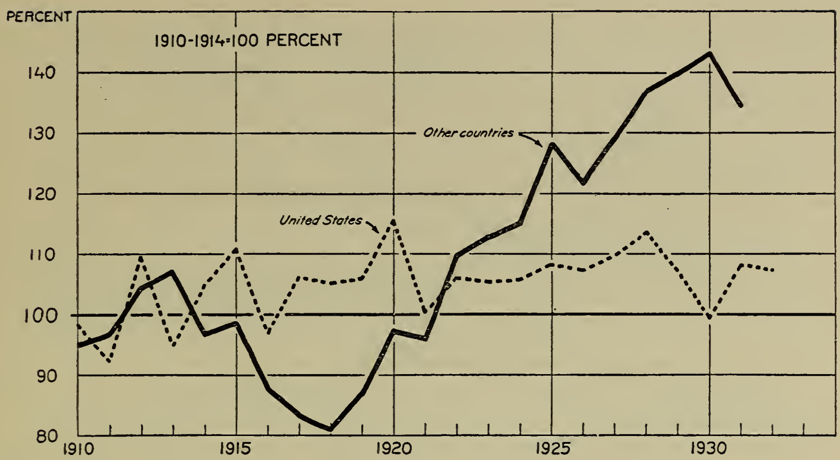
Year	United States [1]	Europe (including Russia) [2]	Canada, Argentina, Australia [3]	Year	United States [1]	Europe (including Russia) [2]	Canada, Argentina, Australia [3]
1909–13	290	532	99	1930	327	553	151
1920	321	450	125	1932	320	584	140
1925	321	503	125				

[1] 13 crops.
[2] Europe, 7 crops; Russia, all crops.
[3] Canada, field crops; Australia, all crops; Argentina, grains and alfalfa.

As a result of the World War, Europe's acreage in certain crops was 82,000,000 less in 1920 than in the pre-war years. Partly to meet this deficit, the acreage in 13 crops in the United States was increased 31,000,000. The aggregate acreage of Canada, Argentina, and Australia was increased 26,000,000.

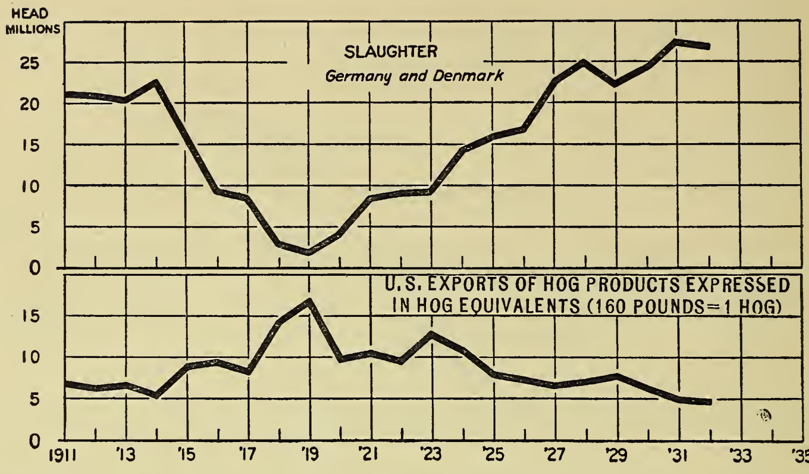
In the United States there has been little change in acreage since 1920. Europe's acreage has been restored and in 1932 exceeded the pre-war acreage by 10 percent. Acreage in Canada, Argentina, and Australia in 1932 was 15,000,000 greater than in 1920 and 41,000,000 greater than in 1909–13.

Domestic and Foreign Crop Production



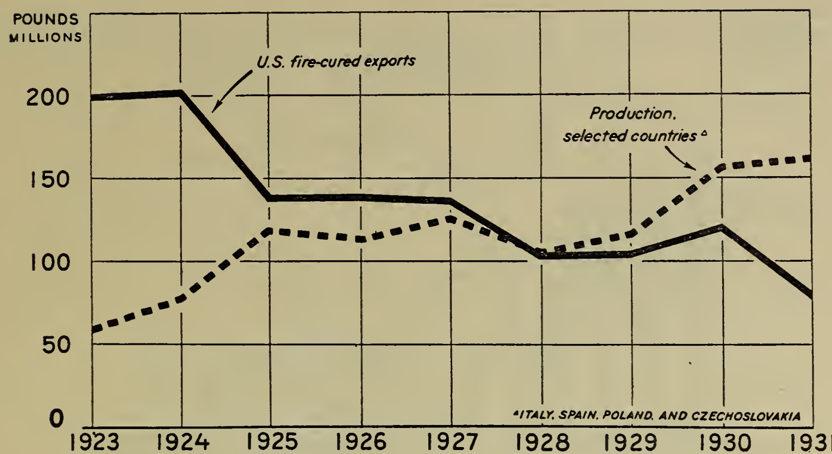
Crop production in the United States and other countries. The production of certain crops in the United States was expanded during the war and has remained on a level higher than the pre-war level since then. The production of other crops, notably cotton, was reduced during the war by boll-weevil damage. In most cases, expansion in certain areas has been accompanied by contraction elsewhere. The net result of these diverse trends as between crops and areas is an aggregate volume that has shown only a slight upward trend during the past 20 years, contrasted with the marked upward trend prior to 1910. Crop production outside the United States (including certain crops not produced in the United States) declined sharply during the active period of the World War, particularly in Europe. Since 1918 the restoration of European production has been rapid and, together with expansion in other countries, has brought the volume of crop output outside the United States to about 40 percent above the pre-war level, and in line with the trend of former periods. This increase in foreign competition has reduced the volume of farm exports from the United States, particularly in wheat and tobacco.

Foreign Competition in Hog Products



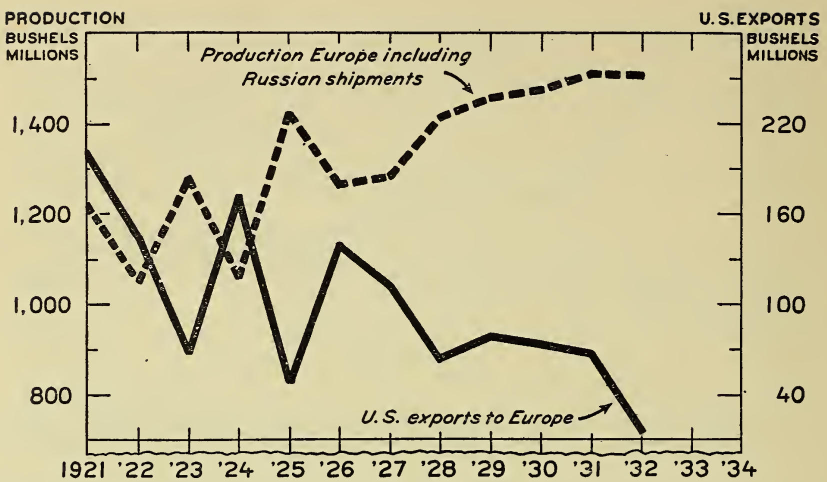
Inspected hog slaughter in Germany and Denmark, and United States exports of hog products, 1911–32. Hog slaughter declined in Germany and Denmark during the war, and increased in the United States. This country expanded its exports of hog products by about 200 percent, or the equivalent of 10,000,000 hogs. After the war Germany and Denmark restored their hog production. They carried it in fact to a point above the pre-war level. American exports of hog products consequently declined. The war-time increase disappeared.

Foreign Competition in Tobacco

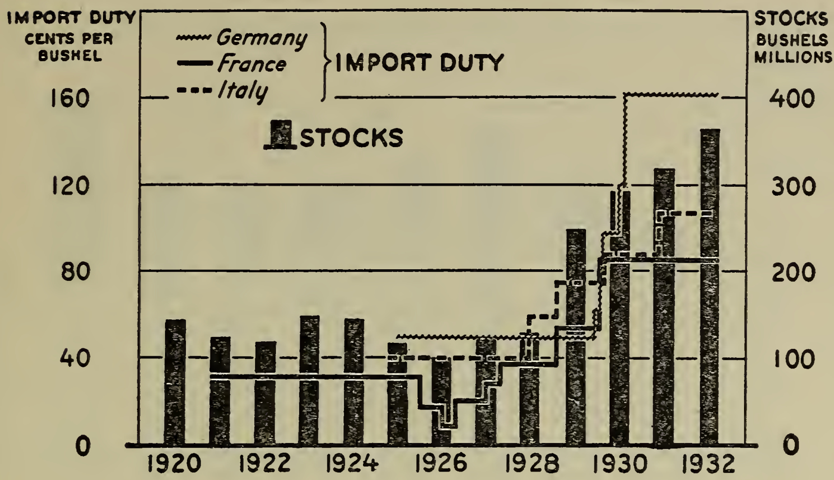


Exports of fire-cured tobacco from the United States and production in selected European countries, 1923–31 (exports for year indicated and production for preceding year). As the supply of tobacco in four competitive European countries expanded about 100,000,000 pounds between 1923 and 1931, the United States exports of fire-cured tobacco declined by somewhat more than 100,000,000 pounds.

Foreign Competition in Wheat

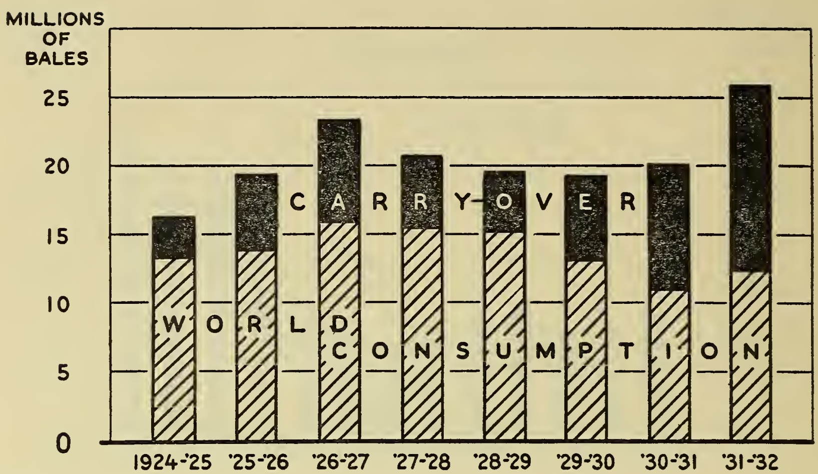


United States exports of wheat (including flour) to Europe and production in Europe, 1921–32. After the war Europe restored its wheat production. It increased the output from 1,100,000,000 bushels in 1922 to 1,500,000,000 bushels in 1932. As a result American exports of wheat to Europe declined. They were less than 20,000,000 bushels in 1932, as compared with 150,000,000 bushels in 1922.



Foreign import duties on wheat, and United States stocks of wheat, July 1, 1920–32. Foreign import duties have contributed to reduce American exports of agricultural products in recent years. It is impossible to measure the influence of these obstacles separately. They dovetail in their effect with the restoration of war-time agriculture in Europe, with the increase in the competition of other agricultural exporting countries, and with the general depression. It is interesting nevertheless to note how the uprearing of trade barriers has paralleled the increase in our wheat carry-over.

Cotton Consumption and Carry-over



Cotton carry-over increases as consumption declines. By the end of 1931 the industrial depression had increased the carry-over to twice what it was at the end of 1929. The inopportune large crop of 1931 increased it still more.

Elements in National Income

Agricultural, nonagricultural, and national income

Year	Gross income of corporations [1]	Estimate of national income [2]	Gross farm income [3]	Wage pay rolls			Dividend and interest payments by corporations [7]	Farm income as percentage of national income [8]
				Factory [4]	Railroads [5]	Construction [6]		
	Million dollars	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Percent*
1919	----------	65, 949	16, 935	10, 462	2, 828	2, 250	3, 189	18. 5
1920	121, 600	73, 999	13, 566	12, 608	3, 682	2, 250	3, 415	14. 9
1921	95, 300	63, 371	8, 927	8, 202	2, 765	1, 990	3, 342	11. 0
1922	103, 000	65, 925	9, 944	8, 648	2, 641	2, 810	3, 400	11. 1
1923	121, 400	74, 337	11, 041	11, 009	3, 004	2, 980	3, 585	10. 8
1924	122, 200	77, 135	11, 337	10, 172	2, 826	3, 330	3, 841	10. 8
1925	137, 900	81, 931	11, 968	10, 730	2, 861	4, 320	4, 086	11. 1
1926	141, 100	84, 238	11, 480	11, 095	2, 946	4, 360	4, 391	9. 6
1927	143, 200	87, 276	11, 616	10, 849	2, 910	4, 480	5, 571	9. 5
1928	155, 900	88, 283	11, 741	10, 902	2, 827	4, 520	6, 028	9. 3
1929	158, 600	91, 405	11, 918	11, 621	2, 897	4, 200	7, 588	(9)
1930	138, 300	81, 295	9, 414	9, 518	2, 551	3, 720	8, 600	(9)
1931	107, 000	67, 000	6, 911	7, 256	2, 095	2, 760	8, 226	(9)
1932	[10] 80, 000	52, 500	5, 143	5, 022	1, 515	1, 640	7, 006	(9)

1 U.S. Treasury Department.
2 National Bureau of Economic Research and U.S. Department of Agriculture.
3 U.S. Department of Agriculture.
4 Federal Reserve Board.
5 Interstate Commerce Commission.
6 Estimates of U.S. Department of Agriculture.
7 Commercial and Financial Chronicle.
8 National Bureau of Economic Research and U.S. Department of Agriculture, percentages based on estimates of farm income included in the estimates of national income, and not those shown in the table.
9 Comparable percentages for 1929–32 are not available, but current data indicate that in 1931 and 1932 the farmers' share of the national income had declined to about 7 percent.
10 Estimated.

Gross income of corporations that handle the bulk of the nation's business rose from $95,000,000,000 in 1921 to nearly $160,000,000,000 in 1929. It fell by 1932 to $80,000,000,000. Treating only the receipts of individuals, the National Bureau of Economic Research estimated that the national income rose from $63,000,000,000 in 1921 to about $91,000,000,000 in 1929, and declined to about $52,500,000,000 in 1932. From 1923 to 1929, the national income increased about 20 percent. Dividend and interest disbursements by corporations increased more than 100 percent—from $3,600,000,000 to $7,600,000,000. These disbursements continued to increase during 1930. They declined less than 20 percent between 1930 and 1932, after 2 years of severe industrial depression. Farm income increased only 8 percent between 1923 and 1929. It declined tremendously thereafter.

Population in Various Industries

Population of the United States gainfully occupied, 1930

[In thousands, i.e., 000 omitted]

Industry	Persons employed	Industry	Persons employed
Agriculture:		Forestry and fishing	270
Farmers	6, 018	Extraction of minerals	1, 158
Managers	74	Manufacturing and mechanical industries	14, 318
Farm laborers:		Transportation	4, 439
Wage workers	2, 727	Trade	7, 537
Unpaid family workers	1, 645	Public service	1, 058
Others	18	Professional service	3, 426
		Domestic and personal service	4, 812
Total	10, 482	Nonspecified	1, 333
		Grand total	48, 833

With the progress of science and invention, the proportion of the population required for agricultural production declines. It now takes only about 10,000,000 persons to supply the home market and to furnish a considerable quantity of farm products for export. The United States has land and labor enough to supply all probable demands for farm products many times over. Agricultural prosperity depends absolutely on restraining production through a balanced use of these resources.

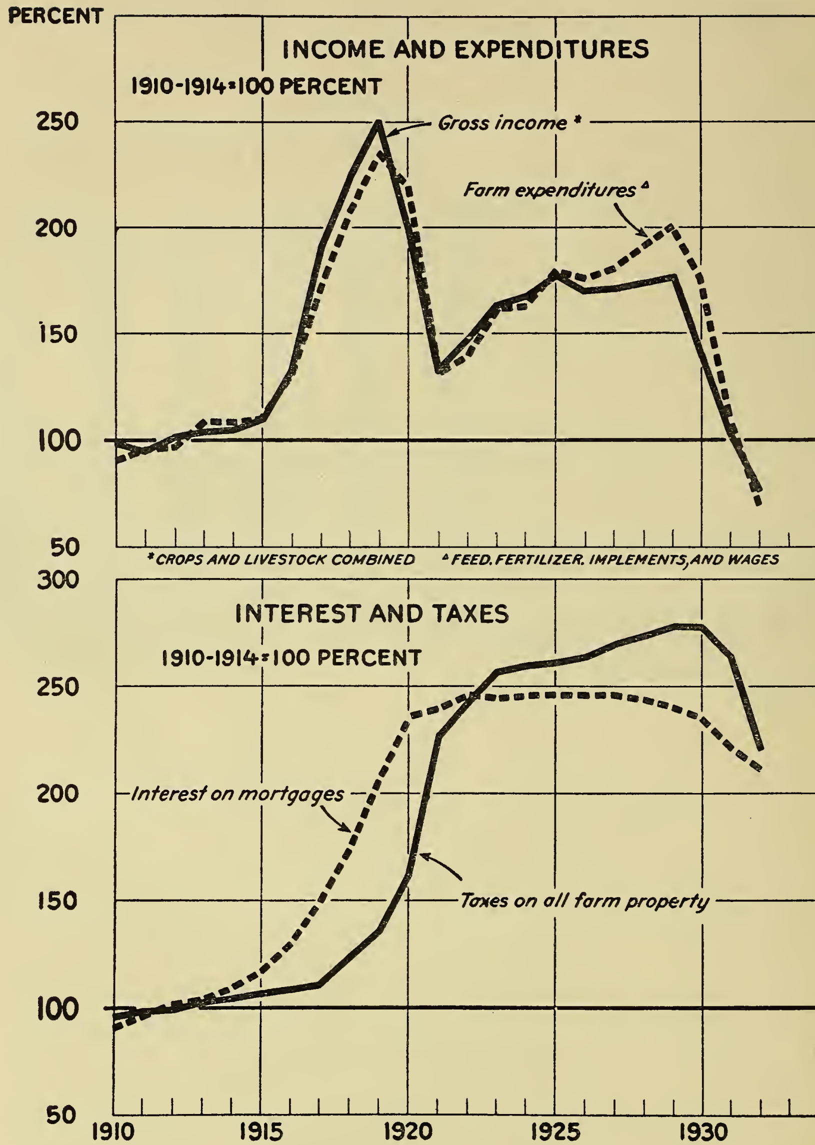
Trend in Farm Income

Gross income from farm production, United States,[1] 1909–32

Year	Crops	Livestock and livestock products	Crops and livestock combined	Gross income [2]		
				Crops	Livestock	Crops and livestock
	Million dollars	*Million dollars*	*Million dollars*	*Percent*	*Percent*	*Percent*
1909	3, 314	2, 925	6, 238	91. 6	93. 0	92. 3
1910	3, 517	3, 126	6, 643	97. 2	99. 5	98. 3
1911	3, 536	2, 836	6, 372	97. 8	90. 2	94. 3
1912	3, 688	3, 096	6, 784	101. 9	98. 5	100. 3
1913	3, 647	3, 328	6, 975	100. 8	105. 9	103. 2
1914	3, 700	3, 328	7, 028	102. 3	105. 9	104. 0
1915	3, 985	3, 410	7, 395	110. 2	108. 5	109. 4
1916	4, 968	3, 947	8, 914	137. 3	125. 6	131. 9
1917	7, 431	5, 401	12, 832	205. 4	171. 8	189. 8
1918	8, 119	6, 982	15, 101	224. 5	222. 1	223. 4
1919	9, 431	7, 503	16, 935	260. 7	238. 7	250. 5
1920	6, 862	6, 704	13, 566	189. 7	213. 3	200. 7
1921	4, 488	4, 440	8, 927	124. 1	141. 3	132. 1
1922	5, 350	4, 594	9, 944	147. 9	146. 2	147. 1
1923	5, 969	5, 072	11, 041	165. 0	161. 4	163. 3
1924	6, 170	5, 167	11, 337	170. 6	164. 4	167. 7
1925	6, 147	5, 820	11, 968	169. 9	185. 2	177. 0
1926	5, 648	6, 012	11, 480	151. 2	191. 3	169. 8
1927	5, 817	5, 799	11, 616	160. 8	184. 5	171. 8
1928	5, 675	6, 066	11, 741	156. 9	193. 0	173. 7
1929	5, 421	6, 497	11, 918	155. 1	200. 5	176. 2
1930	3, 799	5, 615	9, 414	108. 7	173. 2	139. 2
1931	2, 714	4, 197	6, 911	77. 7	129. 5	102. 2
1932	2, 113	3, 030	5, 143	60. 5	93. 4	76. 1

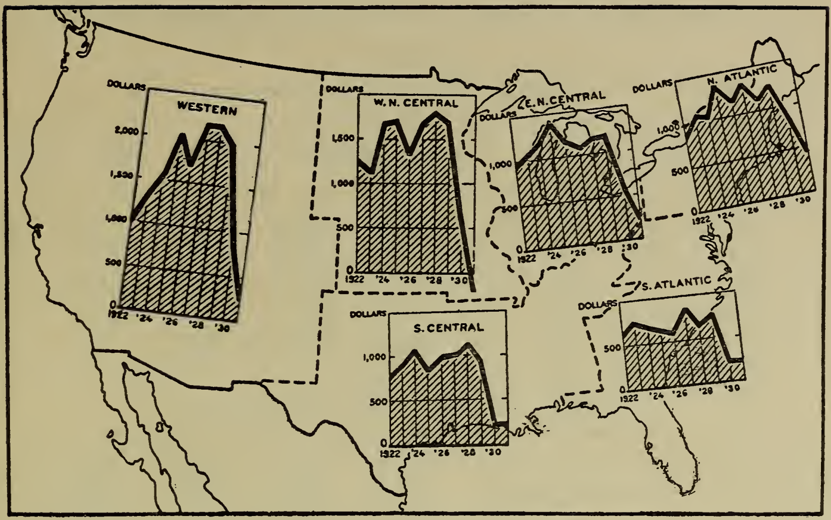
[1] Estimates for 1929–32, revised.
[2] 1910–14=100.

Farm Income and Expenditures



Gross farm income and selected expenditures, 1910–32. Farm expenditures for farm wages, fertilizers, and feed since 1929 have been curtailed in line with the shrinkage of gross farm income. The reduction in expenditures for farm machinery has been even more drastic, while the relatively high cost of interest and taxes have declined only moderately.

Farm Income by Regions



Farm returns, 1922–31, average net results on owner-operator farms, by regions. Farm returns in 1931 for all reporting owner-operators were only about one eighth the average for the years 1923–29. Reports from the West North Central States showed an average net loss. In no section were returns adequate to reward labor or capital.

Labor's Share in Factory Output

Wages, cost of materials, and value of factory production

AMOUNT

[In millions of dollars, i.e., 000,000 omitted]

Year	Wages	Wages and salaries	Cost of materials	Value added	Value of products
1909	3, 427	4, 366	12, 065	4, 019	20, 450
1914	4, 068	5, 342	14, 278	4, 367	23, 988
1919	10, 462	13, 343	37, 233	11, 466	62, 042
1921	8, 302	10, 765	25, 321	7, 567	43, 653
1923	11, 009	13, 816	34, 706	12, 035	60, 556
1925	10, 730	13, 652	35, 936	13, 126	62, 714
1927	10, 849	14, 078	35, 133	13, 507	62, 718
1929	11, 621	15, 216	38, 550	16, 669	70, 435
1931	7, 226	----------	21, 420	----------	41, 433

PERCENTAGE OF VALUE OF PRODUCTS

Year	Wages	Wages and salaries	Cost of materials	Value added	Value of products
1909	16. 8	21. 3	59. 0	19. 7	100
1914	17. 0	22. 3	59. 5	18. 2	100
1919	16. 9	21. 5	60. 0	18. 5	100
1921	18. 8	24. 7	58. 0	17. 3	100
1923	18. 2	22. 8	57. 3	19. 9	100
1925	17. 1	21. 8	57. 3	20. 9	100
1927	17. 3	22. 5	56. 0	21. 5	100
1929	16. 5	21. 6	54. 7	23. 7	100
1931	17. 5	23. 0	51. 7	25. 3	100

Among the causes of the depression must be included maldistribution of income, not merely as between city and country but as between wage earners and recipients of industrial profits. Income very unequally distributed does not move freely into the purchase of consumable goods. Some people spend their money long before they have satisfied their wants, while other people satisfy their wants long before they have spent their money. Thus part of the available purchasing power becomes immobilized. Unless it can be profitably reinvested, it lies idle, and industry slows down. This principle is illustrated above. Factory production in the United States increased in annual value about $10,000,000,000 between 1923 and 1929. Only $600,000,000 of the increase, however, went to wage earners and $800,000,000 to salaried employees. Outlay for raw material absorbed $3,800,000,000. Other costs including profits absorbed $4,600,000,000. Wage payments increased only from $11,009,000,000 in 1923 to $11,621,000,000 in 1929, whereas the value of the factory production in the same period increased from $60,556,000,000 to $70,435,000,000. The disproportionate increase in the value of the production, in contrast with the small increase in wages, indicates the increasing difficulty the country experienced in making buying power and production balance.

Value of Agricultural Capital

Changes in the value of capital used in agricultural production,[1] 1919–32

Year	Land and buildings [2]	Livestock [3]	Farm machinery [4]	Total	Operators' capital	Operators' proportion
	Million dollars	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Percent*
1919	54, 659	8, 815	3, 156	66, 630	47, 515	71. 3
1920	66, 316	8, 525	3, 595	78, 436	55, 932	71. 3
1921	61, 315	6, 413	3, 418	71, 146	49, 938	70. 2
1922	54, 190	5, 104	2, 728	62, 022	42, 705	68. 9
1923	52, 441	5, 400	2, 515	60, 356	41, 502	68. 8
1924	50, 476	5, 117	2, 651	58, 244	39, 868	68. 4
1925	49, 468	5, 041	2, 680	57, 189	39, 030	68. 2
1926	49, 113	5, 403	2, 739	57, 255	38, 847	67. 8
1927	47, 767	5, 537	2, 841	56, 145	37, 822	67. 4
1928	47, 670	6, 041	2, 850	56, 561	37, 972	67. 1
1929	47, 926	6, 578	3, 096	57, 600	38, 599	67. 0
1930	47, 880	6, 490	3, 302	57, 672	38, 391	66. 6
1931	44, 248	4, 822	3, 206	52, 276	34, 216	65. 5
1932	37, 027	3, 459	2, 830	43, 316	27, 865	64. 3

[1] Adjusted for both changes in price level and changes in the amount of land or other commodities owned by farm operators.

[2] Based on census values of all land and buildings on census years. Values in intercensal years arrived at from index of land values per acre and adjusted for changes in acreage.

[3] Value of all livestock on farms.

[4] Value of all farm machinery, tractors, and trucks, and one half the value of automobiles. Assumed that one half of the use of the automobile is for production.

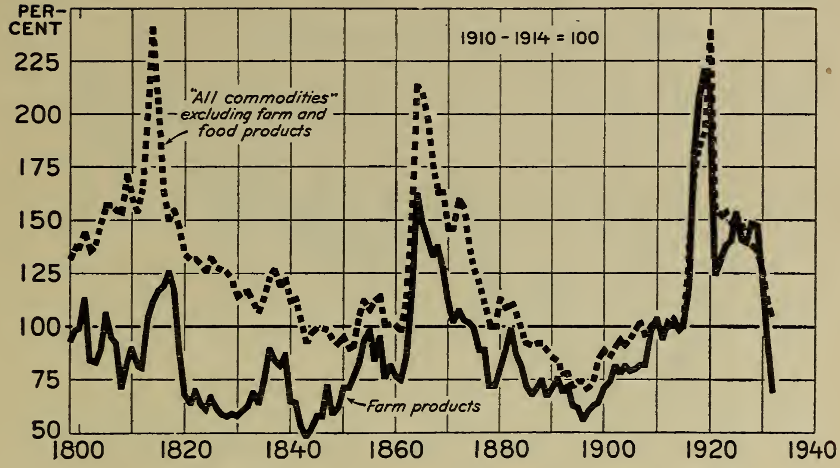
Returns in Agriculture and Industry

Net earnings of owner-operated farms and industrial corporations

Industry	Net earnings as percentage of value of capital in—			
	1929	1930	1931	1932
7,000 to 12,000 owner-operated farms	5.2	0.4	−1.9	−4.5
1,302 manufacturing and trading corporations	13.5	6.7	2.5	
1,810 corporations, manufacturing, trading, public utilities, insurance, and finance			2.4	.02

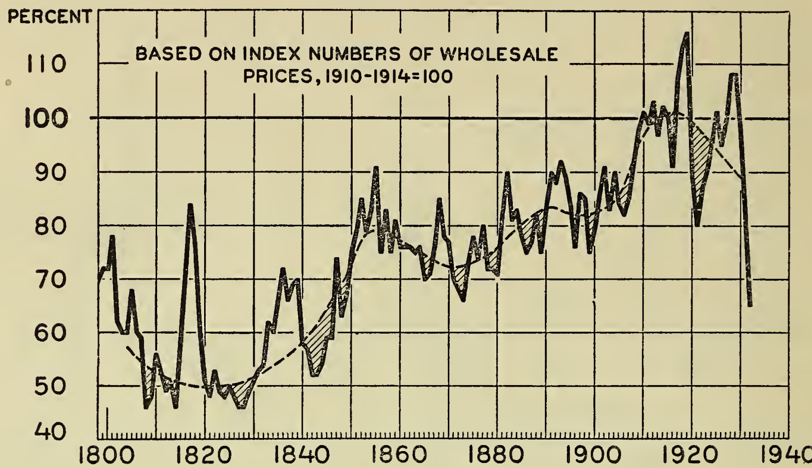
Judging from reports of larger and better than average owner-operated farms, and current net-income reports of industrial corporations, it appears that (1) the rate of return on nonagricultural capital in 1929 was about two and a half times the rate earned on agricultural capital; (2) the rate earned on nonagricultural capital was reduced by about half in 1930, while net earnings on agricultural capital was practically all wiped out; (3) in 1931 nonagricultural capital by the process of releasing employees and curtailing output and making other adjustments in costs, still earned on the average a bare return on capital while farmers on the average went deeper "in the red"; and (4) by 1932 the earnings of nonagricultural industries having net incomes were about offset by the net losses of other industries, while farmers for the most part experienced still greater losses.

Agricultural and Industrial Prices



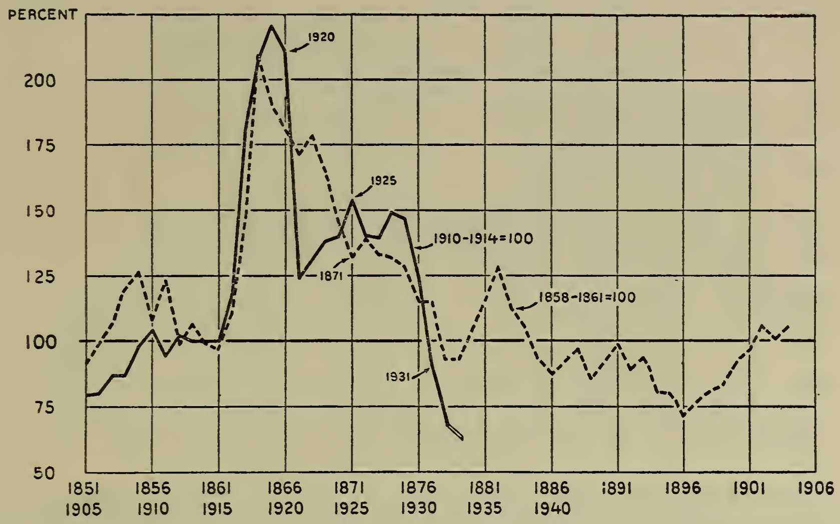
Index numbers of wholesale prices of farm and nonagricultural products, 1798–1932. In the nineteenth century, and during the first decade and a half of the twentieth century, the trend of agricultural prices was generally upward and the trend of nonagricultural prices downward. Both groups of prices moved upward together under the stimulus of the War of 1812 and under the stimulus of the Civil War. In like manner they rose together during the World War. Following the crisis of 1929, agricultural prices dropped to the low levels of the 1890's, whereas the average of other prices dropped only to the pre-war level.

Exchange Value of Farm Products



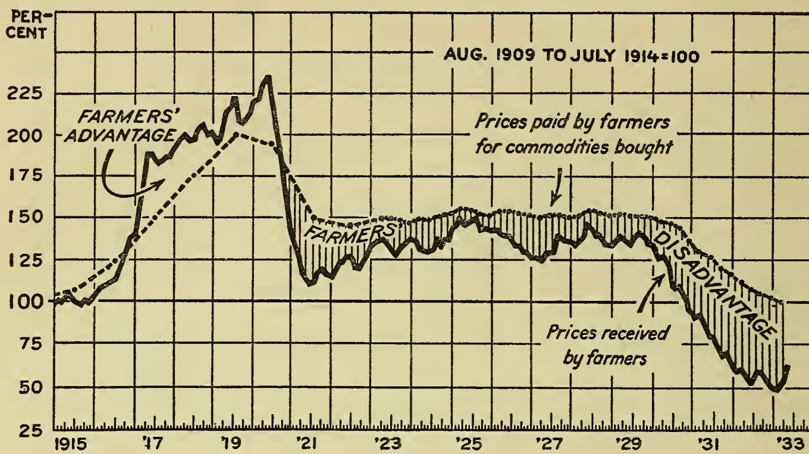
Ratios of prices of farm products to prices of nonagricultural products, 1798–1932. Farm products generally rose in exchange value in the century preceding the war. As the country became more and more industrialized, the domestic market for agricultural commodities improved and the prices of factory goods declined. This was not in itself a proof of agricultural well-being, since farmers had continually to increase their outlay for industrial products. It is nevertheless true that a fair exchange value for agricultural products is essential to agricultural prosperity. This basis does not now exist. The war reversed the favorable trend that had persisted for a century, and the second post-war depression (1930–32) wiped out the relative gains of 90 years

Farm Price Trends in Two Periods



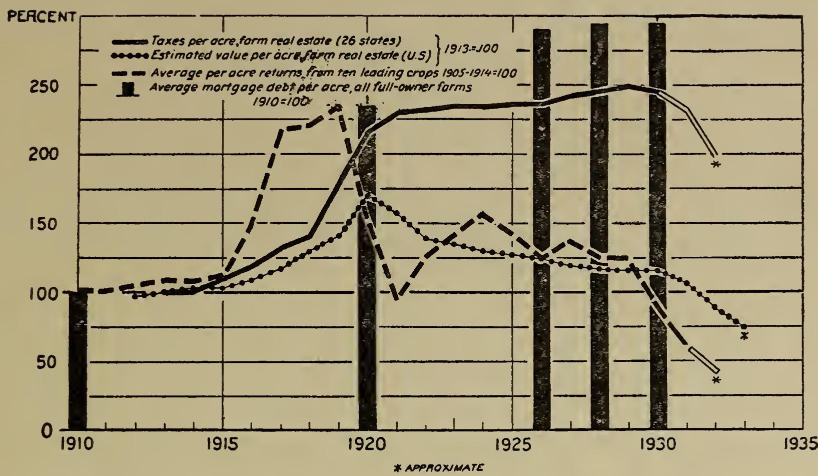
Index numbers of wholesale prices of farm products for two periods, 1851–1904 and 1905–33. Except for the sharp decline of 1920 and the relatively stable price period of 1923–29, the post-war deflation in farm prices has followed a course similar to that of the post-Civil War period, 1864–79. The former deflation period, which ended in 1896, was temporarily interrupted by higher prices in 1880–83 accompanying industrial revival, increased foreign demand for American surplus farm products, and credit expansion following the resumption of specie payments in 1879.

Gap Between Farm and Nonfarm Prices



Index of prices received and paid by farmers. The advantage that farmers gained during the war when prices received for farm products rose to higher levels than prices paid for industrial goods was lost in the 1920–21 depression. Relative to other prices, farm prices have been low ever since 1920, and the disparity was accentuated during 1930–32, when farm prices fell so low that they had only half their pre-war purchasing power.

Debt and Tax Burdens of Farmers



Returns per acre of 10 leading crops, and taxes, land values, and mortgage debt per acre of farm real estate. Returns per acre in 1932–33 were about 60 percent less than in the pre-war years, while the average mortgage debt per acre was nearly three times and taxes about twice as high. Consequently land values have fallen still further to about three fourths of their pre-war value for the country as a whole.

Price Maladjustments

Selected indexes of prices, wages, costs of distribution, farm taxes, and mortgage interest, 1913–32

[1910–14=100]

Year	Prices received by farmers	Prices paid by farmers for commodities used in—			Farm wages	Industrial wage rates [1]	Freight rates [2]	Revenue per ton-mile	Cost of distributing food [3]	Farm taxes payable	Mortgage interest payable
		Living	Production	Living and production							
1913	100	100	102	100	104	102	100	99	104	102	104
1914	102	102	99	101	101	104	100	99	105	104	109
1915	100	107	103	106	102	104	100	99	105	106	116
1916	117	125	121	123	112	108	101	97	110	109	129
1917	176	148	152	150	140	114	102	98	129	111	149
1918	200	180	176	178	176	132	130	116	159	123	174
1919	209	214	192	205	206	150	132	133	174	136	207
1920	205	227	175	206	239	192	169	144	202	161	236
1921	116	165	142	156	150	197	169	175	190	226	240
1922	123	160	140	152	146	186	158	161	175	242	246
1923	134	161	142	153	166	202	158	153	177	256	244
1924	134	162	143	154	166	218	158	153	180	260	246
1925	147	165	149	159	168	226	158	150	185	260	246
1926	136	164	144	156	171	238	158	148	192	264	246
1927	131	161	144	154	170	245	157	148	190	269	246
1928	139	162	146	156	169	245	156	148	190	274	244
1929	138	160	146	155	170	245	156	148	198	278	240
1930	117	151	140	146	152	248	154	146	196	278	235
1931	80	129	122	126	116	247	145	144	178	264	221
1932	57	110	108	109	86	216	137	143	153	221	210

[1] Union wage rates United States as of May of each year.
[2] Average of rates on wheat, livestock, and cotton.
[3] This index represents changes in the spread between prices received by producers and retail prices for a selected group of farm products.

This table epitomises the price maladjustments that have resulted from the economic trends indicated in preceding charts and tables. The greatest degree of maladjustment occurred in 1932. Efforts have been set in motion to restore a sounder balance between agricultural prices and the prices of nonagricultural goods and services. The great problem is to make the desired readjustment permanent through a direction of production and a distribution of the income so as to meet both the demands of justice and the demands of economic stability.

O